

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1.-5. (Canceled)
6. (Previously presented) The method of claim 31 further comprising:
providing a cursor associated with the query.
7. (Canceled)
8. (Previously presented) The method of claim 31 further comprising:
marshaling data between the runtime environment and the database management system.
9. (Previously presented) The method of claim 31, further comprising:
running an application operation selected from a group of operations comprising
functions, procedures, and triggers is directly in the database management system.
- 10.-15. (Canceled)
16. (Previously presented) The system of claim 37, wherein the memory further comprises
instructions that upon execution cause the computer system to:
provide a cursor for the query.
17. (Canceled)
18. (Previously presented) The system of claim 37, wherein the memory further comprises
instructions that upon execution cause the computer system to:
marshal data between the runtime environment and the database management system.

19. (Previously presented) The system of claim 37, wherein the memory further comprises instructions that upon execution cause the computer system to:

run an application operation selected from a group of operations comprising functions, procedures, and triggers encoded in the native query language directly in the database management system.

20.-25. (Canceled)

26. (Previously presented) The computer-readable storage medium of claim 43 further comprising instructions that upon execution cause the computer system to:

provide a cursor on any type of query executed.

27. (Canceled)

28. (Previously presented) The computer-readable storage medium of claim 43 further comprising instructions that upon execution cause the computer system to:

marshal data between the runtime environment and the database management system.

29. (Previously presented) The computer-readable storage medium of claim 43 further comprising instructions that upon execution cause the computer system to:

run an application operation selected from a group of operations comprising functions, procedures, and triggers encoded in the native query language directly in the database management system.

30. (Canceled)

31. (Currently amended) A computer-implemented method, comprising:

- running, on a computer system, a database management system, the database management system configured to process queries generated in a native query language for the database management system;
- running, on the computer system, a runtime environment configured to manage execution of intermediate language code;
- establishing a connection to a client, the client associated with a set of database access privileges;
- receiving, from ~~[[a]] the~~ client, a query that invokes intermediate language code;
- compiling by the runtime environment during ~~[[the]] a~~ runtime of the database management system, the intermediate language code into an expression encoded in the native query language;
- generating a context object including information comprising the set of database access privileges, a connection context of the client, a command context of the client, a transaction context of the client, a pipe context of the client, and a trigger context of the client;
- exposing the context object to the database management system through ~~[[the]] a~~ utilization of an in-process provider, ~~wherein~~ the in-process provider keeps track of data obtained from the database management system that is referenced from the runtime environment and prevents access of the database management data outside a runtime environment execution frame;
- executing the expression encoded in the native query language based on the context object; and
- storing information indicative of a result of the query in memory.

32.-35. (Canceled)

36. (Previously presented) The method of claim 31, wherein the in-process provider supports more than one pending executing command for the connection to the client.

37. (Currently amended) A system for executing application code in a database management system (DBMS), the system comprising:

- a processor; and

- a memory coupled to the processor, the memory including instructions stored therein that upon execution cause the processor to:

 - run a database management system, the database management system configured to process queries generated in a native query language;

 - run a runtime environment configured to ~~[[manage]]~~ manage execution of intermediate language code;

 - establishing a connection to a client, the client associated with a set of database access privileges;

 - receive a query that invokes intermediate language code from the client;

 - compile by the runtime environment, the intermediate language code into an expression encoded in the native query language;

 - generate a context object including information comprising the set of database access privileges, a connection context of the client, a command context of the client, a transaction context of the client, a pipe context of the client, and a trigger context of the client;

 - expose the context object to the database management system through ~~[[the]]~~ a utilization of an in-process provider, ~~wherein~~ the in-process provider keeps track of data obtained from the database management system that is referenced from the runtime environment and prevents access of the database management data outside a runtime environment execution frame;

 - execute the expression encoded in the native query language based on the context object.

38. (Previously presented) The system of claim 37, wherein the context object further comprises:

- a command with a state execution context;

the transaction context of the client associated with a command;
a path through which requests and results may be sent or received between the client and the database management system; and
a forward-only cursor on top of statement execution results.

39.-41. (Canceled)

42. (Currently amended) The system of claim 37, wherein the in-process provider supports for more than one pending executing command for ~~[[a]] the~~ connection ~~[[of]] to~~ the client.

43. (Currently amended) A computer-readable storage medium comprising computer-readable instructions stored thereon that upon execution by a processor of a computer system cause the computer system to:

run a database management system, the database management system configured to process queries generated in a native query language;

run a runtime environment configured to ~~[[manage]]~~ manage execution of intermediate language code;

~~establishing~~ establish a connection to a client, the client associated with a set of database access privileges;

receive a query that invokes intermediate language code from the client;

compile by the runtime environment, the intermediate language code into an expression encoded in the native query language;

generate a context object including the set of database access privileges, a connection context of a client, a command context of the client, a transaction context of the client, a pipe context of the client, and a trigger context of the client;

expose the context object to the database management system through ~~[[the]]~~ a utilization of an in-process provider, ~~wherein~~ the in-process provider keeps track of data obtained from the database management system that is referenced from the runtime environment and prevents access of the database management data outside a runtime environment execution frame; and

execute the expression encoded in the native query language based on the context object.

44. (Previously presented) The computer-readable instructions of claim 43, wherein context object further comprises:

a command with a state execution context;

a transaction context associated with a command;

a path through which requests and results may be sent or received between the client and the database management system;

a trigger context, wherein the trigger results from an operation of the client; and

a forward-only cursor on top of statement execution results.

45.-47. (Canceled)

48. (Currently amended) The computer-readable storage medium of claim 43, wherein the in-process provider supports more than one pending executing command for [[a]] the connection [[of]] to the client.